COMPRESSOR TECHNICAL DATA

COMPRESSOR DEFINITION

Designation	**EM X32CLC**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513301889**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	Static	187 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/7	[hp]
2 Displacement	5.96	[cm³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.3	[kg] (16.09 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA20E61	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(300)	[µF(VAC minimum)]
5 Motor protection	4TM189KFBYY-73	
6 Start winding resistance	22.72	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	42.27	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.50	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**ASHRAE LBP-NOFAN** **Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F)** **54.4°C (129.92°F))**	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
315	79	92	56	0.29	0.99	5.67	1.43	1.66

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	221	56	65	35	0.20	0.69	6.26	1.58	1.83
-30	**(-22)**	289	73	85	45	0.23	0.90	6.59	1.66	1.93
-25	**(-13)**	368	93	108	51	0.25	1.15	7.32	1.84	2.14
-20	**(- 4)**	464	117	136	56	0.28	1.46	8.36	2.11	2.45
-15	**(+ 5)**	581	146	170	60	0.30	1.83	9.63	2.43	2.82
-10	**(+14)**	723	182	212	65	0.32	2.28	11.01	2.78	3.23

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	172	43	50	35	0.19	0.54	4.93	1.24	1.44
-30	**(-22)**	244	61	71	45	0.23	0.76	5.38	1.36	1.58
-25	**(-13)**	325	82	95	53	0.26	1.02	6.14	1.55	1.80
-20	**(- 4)**	422	106	124	59	0.29	1.32	7.13	1.80	2.09
-15	**(+ 5)**	537	135	157	65	0.32	1.69	8.24	2.08	2.41
-10	**(+14)**	676	170	198	72	0.35	2.13	9.39	2.37	2.75

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	131	33	39	34	0.19	0.41	3.97	1.00	1.16
-30	**(-22)**	205	52	60	45	0.23	0.64	4.55	1.15	1.33
-25	**(-13)**	286	72	84	53	0.26	0.90	5.36	1.35	1.57
-20	**(- 4)**	381	96	112	60	0.30	1.20	6.30	1.59	1.84
-15	**(+ 5)**	493	124	144	68	0.34	1.55	7.27	1.83	2.13
-10	**(+14)**	627	158	184	76	0.38	1.98	8.20	2.07	2.40

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	101	26	30	31	0.18	0.32	3.23	0.81	0.95
-30	**(-22)**	174	44	51	43	0.22	0.55	3.95	1.00	1.16
-25	**(-13)**	254	64	74	52	0.26	0.80	4.81	1.21	1.41
-20	**(- 4)**	344	87	101	61	0.30	1.08	5.71	1.44	1.67
-15	**(+ 5)**	451	114	132	70	0.34	1.42	6.56	1.65	1.92
-10	**(+14)**	579	146	170	80	0.39	1.83	7.27	1.83	2.13

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42º up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		